Armed Forces College of Medicine
AFCM

Good Morning
Wishing You A
Bright & Happy Day

Diseases of Oral Cavity

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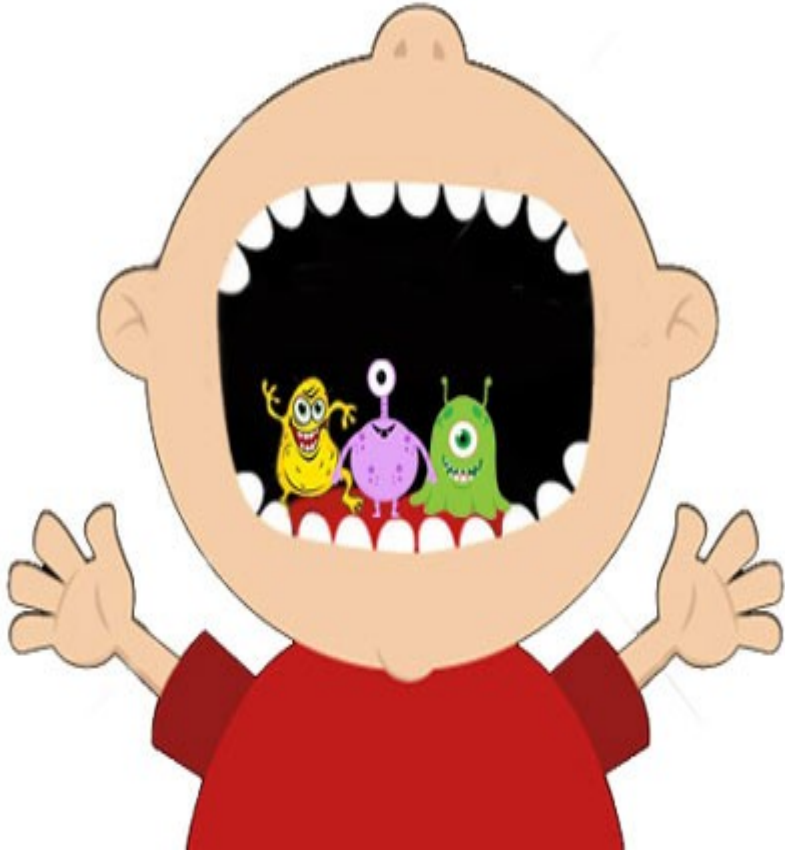

INTENDED LEARNING OBJECTIVES (ILO)

By the end of this lecture you will be able to:

- Describe morphologic features of ulcers of oral cavity
- Explain the pathology of leukoplakia /Erythroplakia
- Recognize tumours of the oral cavity.
- Describe pathology of squamous cell carcinoma of oral cavity
- Correlate pathologic features of oral cavity diseases with their clinical picture and complications

Lecture Plan

1. Part 1 (5min):Ulcers of the tongue
2. Part 2 (20 min) :Inflammatory lesions of oral cavity –leukoplakia & erythroplakia
3. Part 3 (15): Tumours of oral cavity
4. Lecture Quiz (5 min)

Inflammatory Lesion of Oral Cavity

1- Chelitis: inflammation of lips. eg Herpes simplex

2- Stomatitis: inflammation of mucous membrane of mouth eg Aphthous ulcer

3- Glossitis: Inflammation of tongue

Ulcers of Oral Cavity

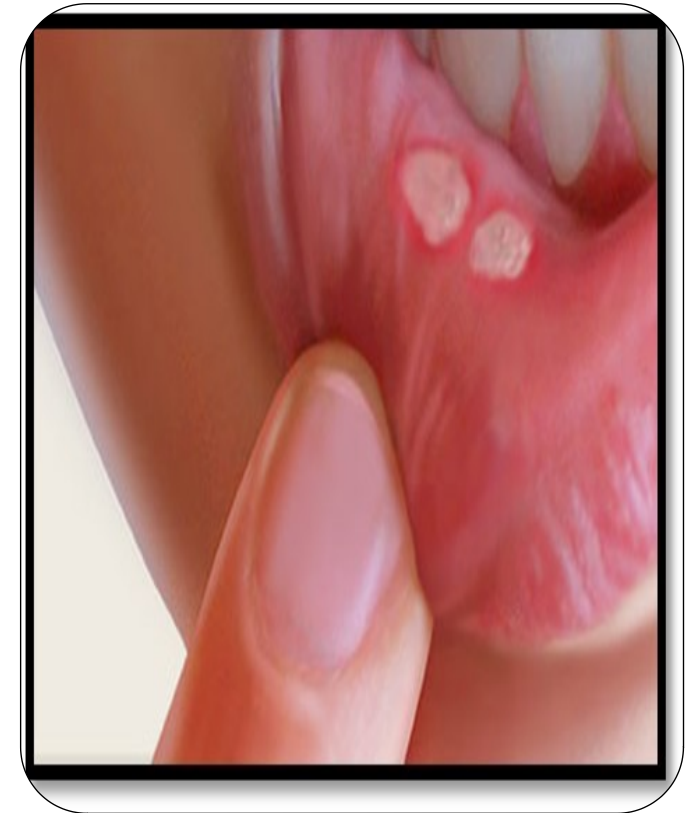
1. Simple traumatic ulcer: with ragged tooth or ill fitting dentures.
2. **Aphthous ulcer**
3. **Herpetic ulcers.**
4. **Oral Candidiasis**
5. Tuberculous ulcer
6. Syphilitic ulcer
7. Malignant ulcer

Aphthous Ulcers (Canker Sores)

Predisposing factors

- Triggered by stress, fever, ingestion of certain foods
- Self-limited -but may recur

Gross:

- Small-painful -shallow ulcers.
- covered with gray-white exudate with erythematous rim.

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Herpetic stomatitis
(cold sores or fever blisters)

Predisposing factors

- Upper respiratory tract infections
- Immunosuppression

Pathogenesis: (Serous inflammation)

- Herpes simplex virus, type I and II infect oral mucosa
- Transmitted from person to person, mostly by kissing

https://upload.wikimedia.org/wikipedia/commons/d/da/Herpes%28PHIL_1573_lores%29.jpg

Herpetic stomatitis

Gross:

- Small vesicles on gingiva, lips, palate & tongue.
- Rupture, leaving shallow, painful ulcers
- **Recurrence** is common

Mic :

- Infected cells become ballooned develop
- **Intra-nuclear acidophilic viral inclusions**.

Complications:

- Dissemination (In immune-compromised)

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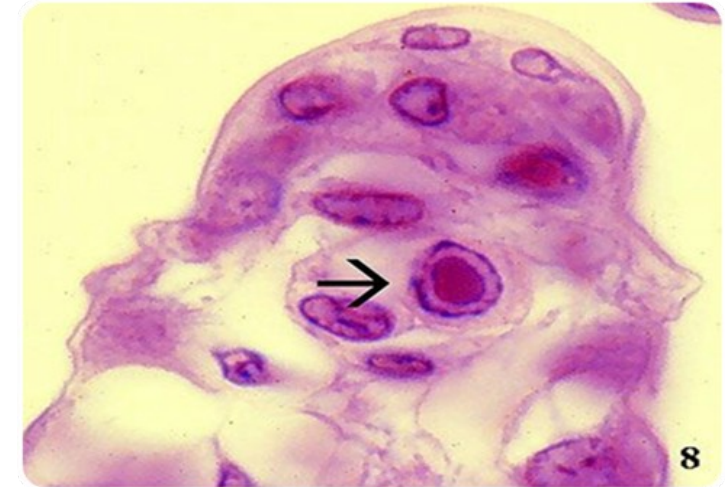

https://s3.amazonaws.com/classconnection/149/flashcards/7156149/png/screen_shot_2015-05-03_at_24805_pm-14D1B1BCD4241DCD1EA-thumb400.png

Oral Candidiasis

Pathogenesis :

- Candida albicans most common fungal infection of oral cavity

Predisposing factors

- Immunosuppression e.g. newborns, diabetics
- Chemotherapy or long term antibiotics

Gross:

- Curd like, circumscribed plaque in oral cavity.
- Pseudomembrane can be scraped off

Mic :

Pseudomembrane +fungal organisms

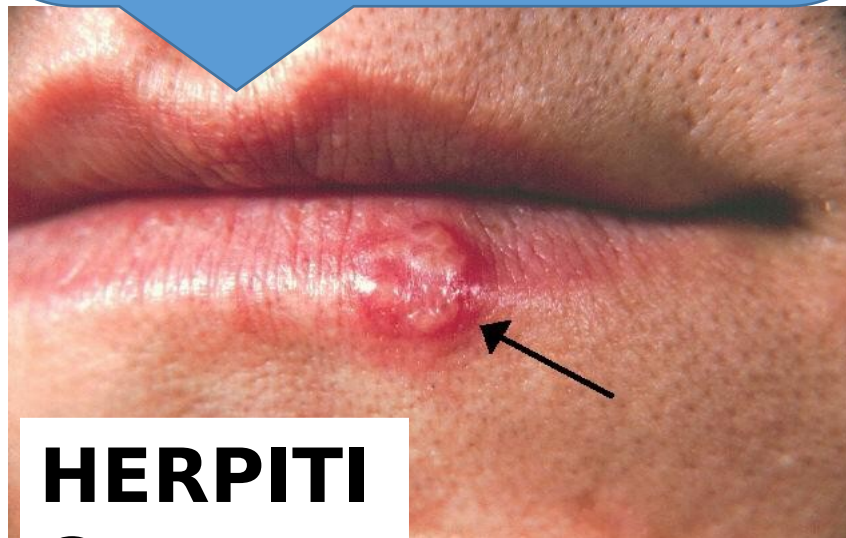
https://healthjade.net/wp-content/uploads/2017/11/oral-thrush.jpg

Ulcers of Oral Cavity

painful shallow ulcers.

- Stress related
- self limited- Recur
- covered with gray-white exudate

APHTHOUS

- Herpes simplex virus
- Small vesicles > painful ulcers
- Recur
- ballooned cells & intraneuclear acidophilic inclusions

HERPITIC

- Candida albicans
- Curd like Pseudomembrane can be scraped off
- Pseudomembrane +fungal organisms

Candidiasis

Ulcers of oral cavity *(Quiz)*

Complete :

1. **Intra-nuclear acidophilic viral inclusions are seen in ……………………………………………………**

2. **Oral candidiasis appears as ……………………………………………………**

3. **Stress related self limited oral ulcers not induced by infection are known as …………………………………………**

Ulcers of oral cavity *(Quiz)*

Complete :

1. **Intra-nuclear acidophilic viral inclusions are seen in Herpetic stomatitis**
2. **Oral candidiasis appears as curd like pseudomembrane**
3. **Stress related self limited oral ulcers not induced by infection are known as aphthous ulcers**

Time to think

A patient presented with these **White patches THAT CAN NOT BE SCRAPED OFF**

- **Is this due to fungal infection ?**
- **Is it serious ?**

https://assets.nhs.uk/prod/images/BPG54A1.2e16d0ba.fill-320x213.jpg

Leukoplakia & Erythroplakia

Leukoplakia :

White patch or plaque **THAT CAN NOT BE SCRAPPED OFF**
and cannot be characterized as any other disease

Erythroplakia :

Red velvety, flat patch(sometimes eroded lesion) without an associated inflammation

Pathogenesis of both :

Unknown cause
Strong association with tobacco- use & HPV

https://www.aocd.org/resource/resmgr/ddb_high/leukoplakia_high.jpg

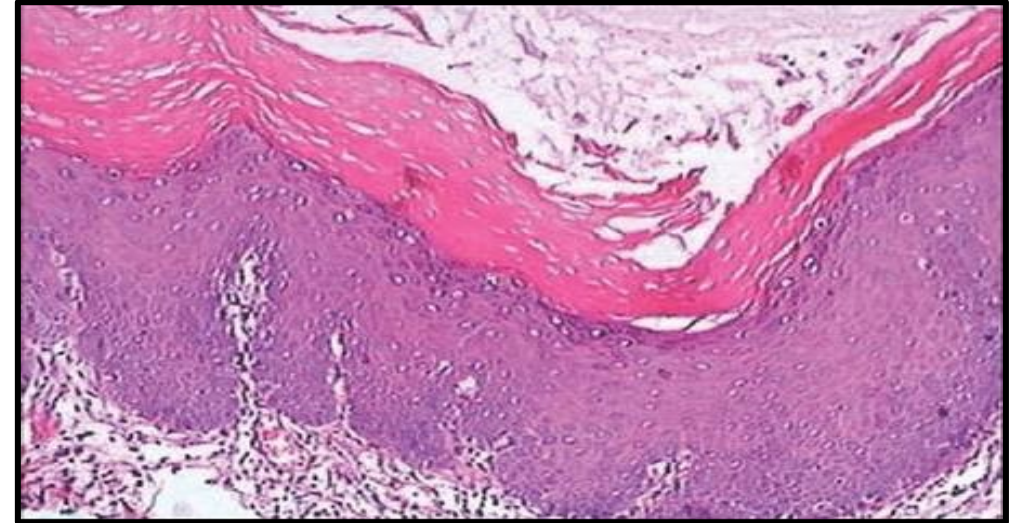
http://www.oralmedicinelondon.co.uk/images/red-patches.jpg

Leukoplakia & Erythroplakia

Mic of both

- Hyperplastic stratified squamous epithelium
- Hyperkeratosis/Parakeratosis
- without underlying epithelial dysplasia or with mild to severe dysplasia up to carcinoma in situ

:Complication

- **BOTH CONDITIONS ARE PRECANCEROUS.**
- Erythroplakia is associated with a

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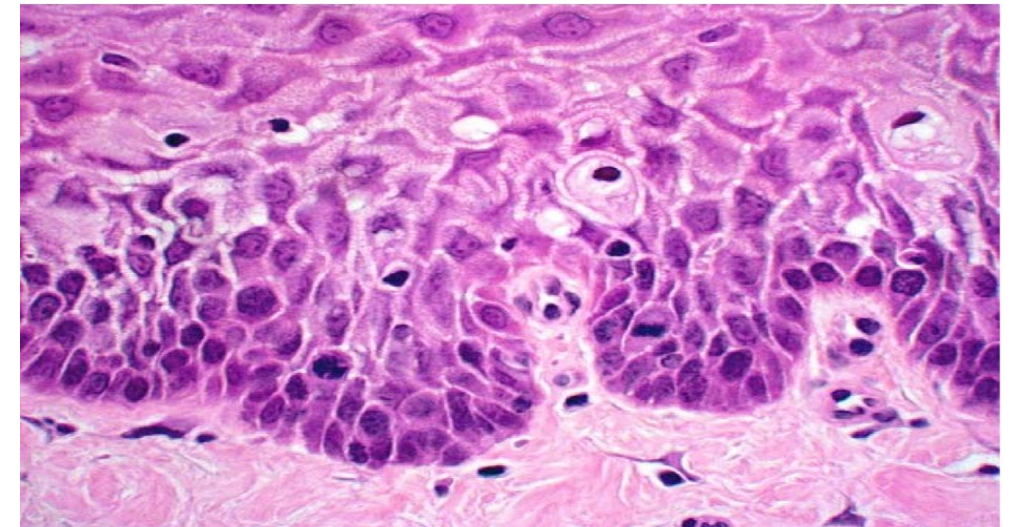
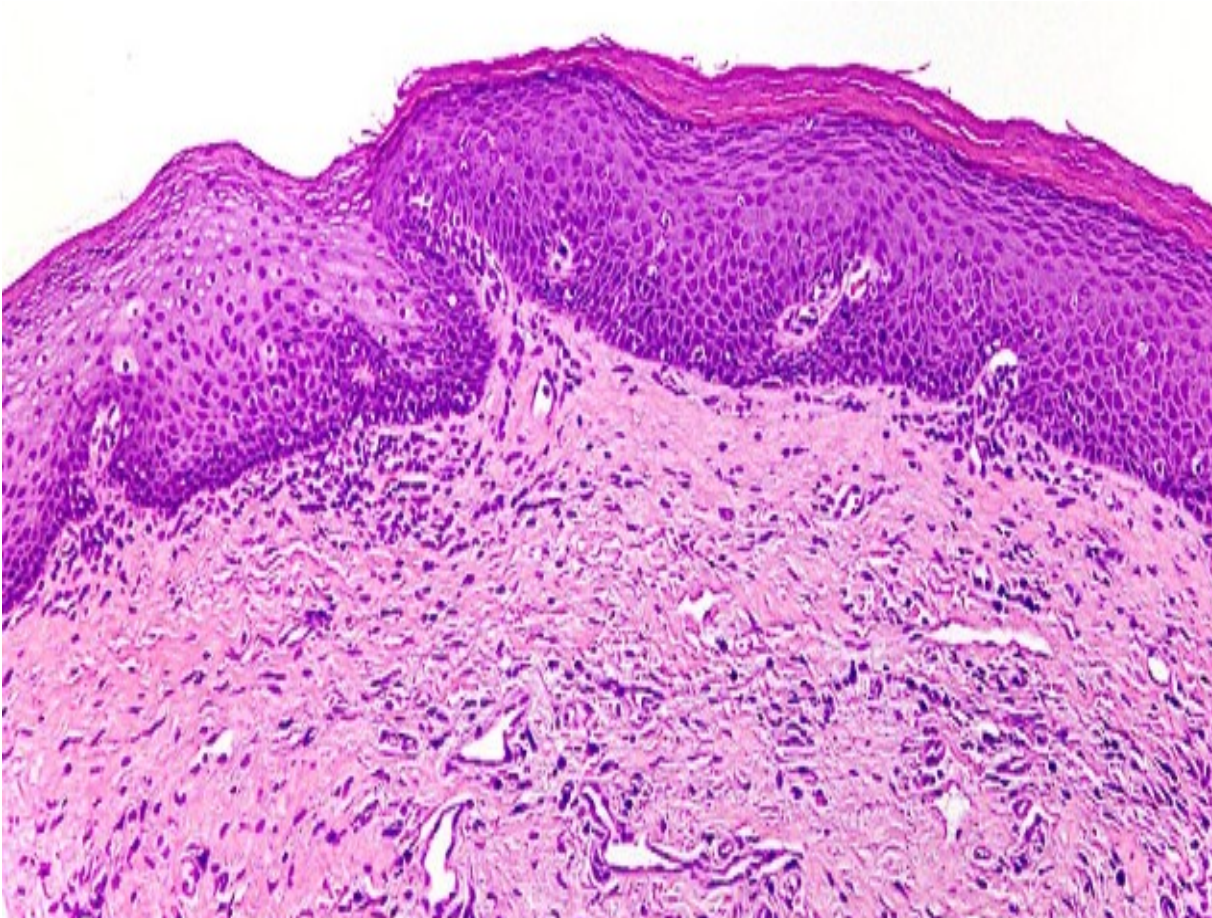
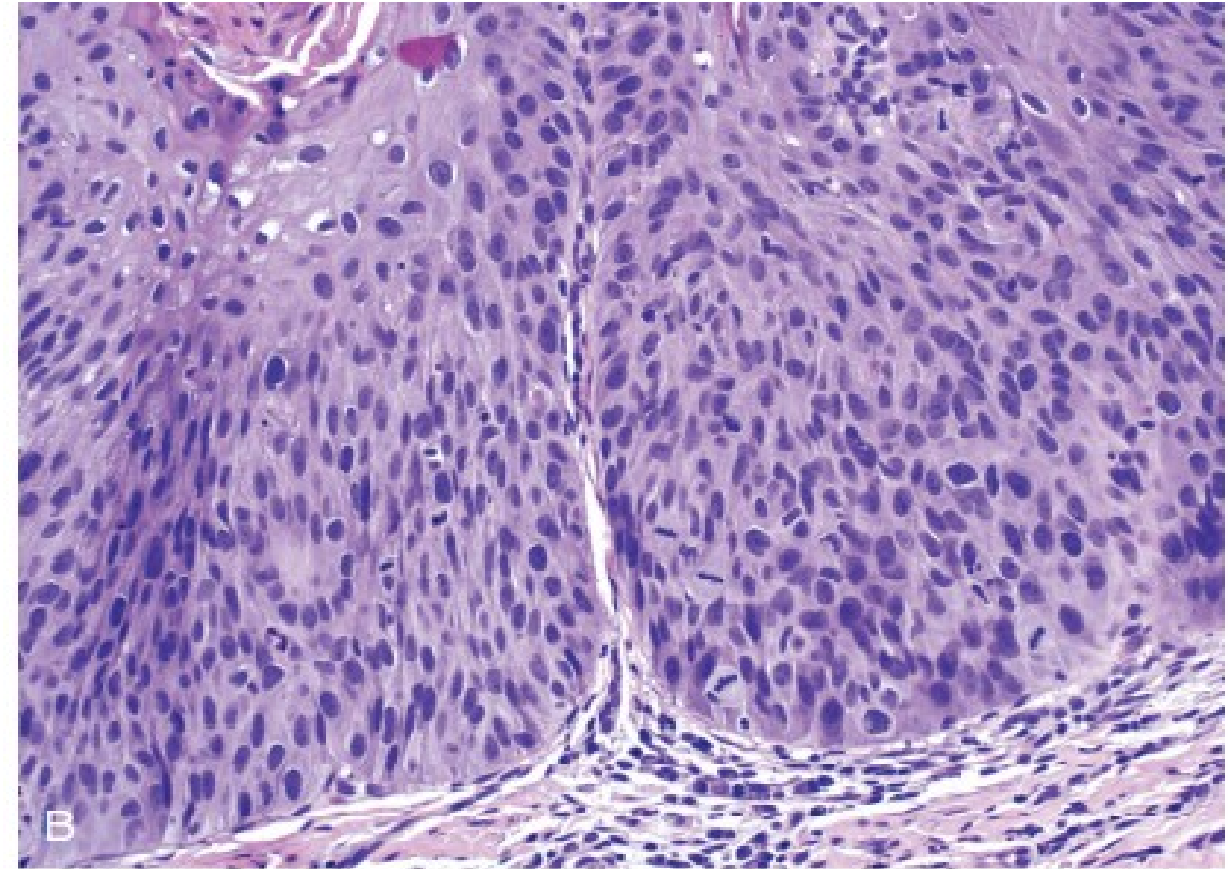

Leukoplakia & Erythroplakia

sharply demarcated hyperkeratosis with dysplasia,

Dysplasia

https://www.pathologyoutlines.com/topic/oralcavityleukoplakia.html

Leukoplakia & Erythroplakia

Epithelial dysplasia

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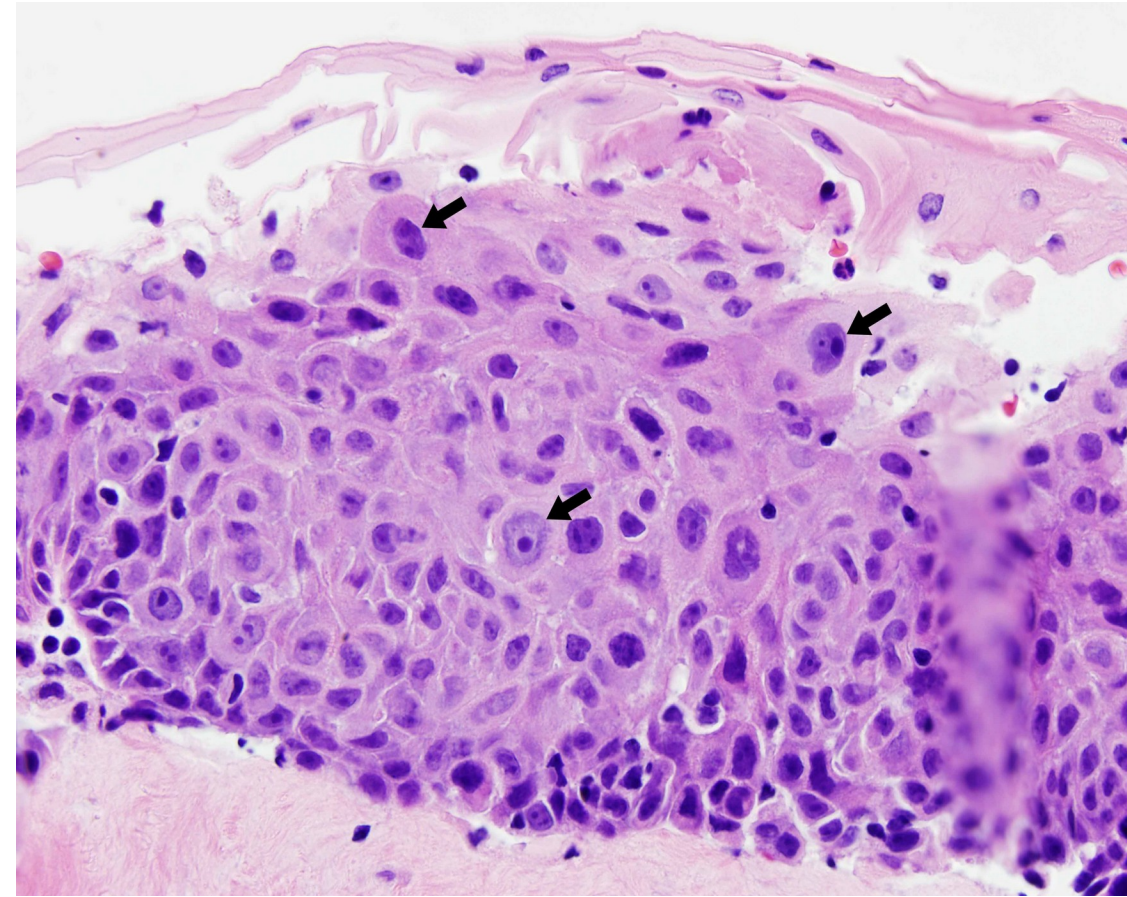
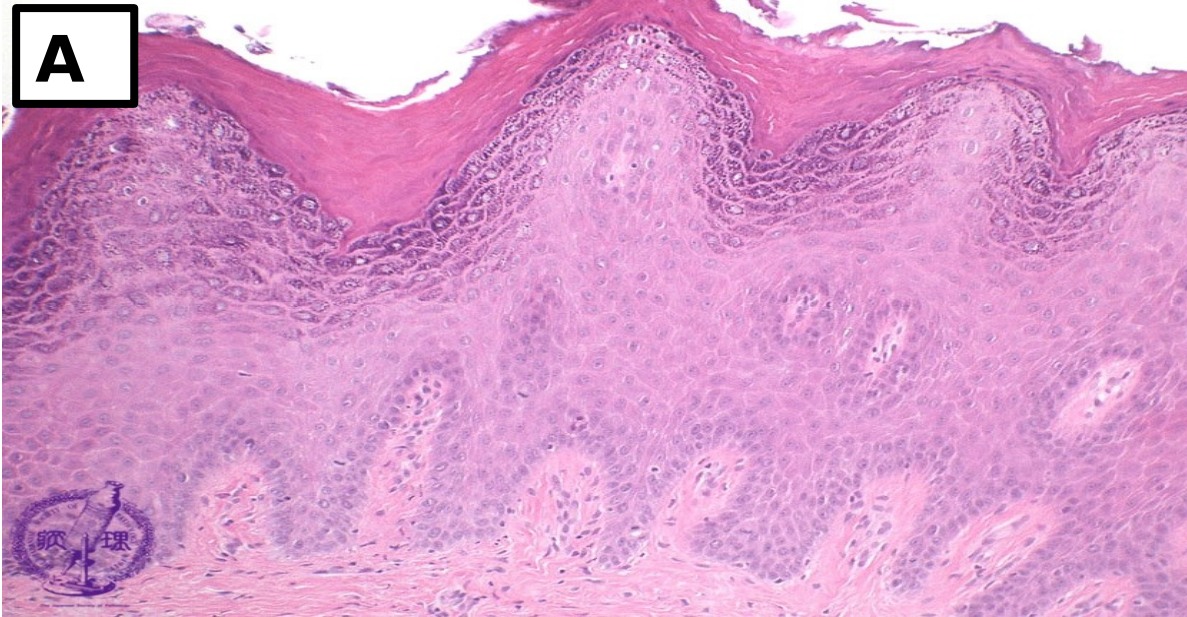
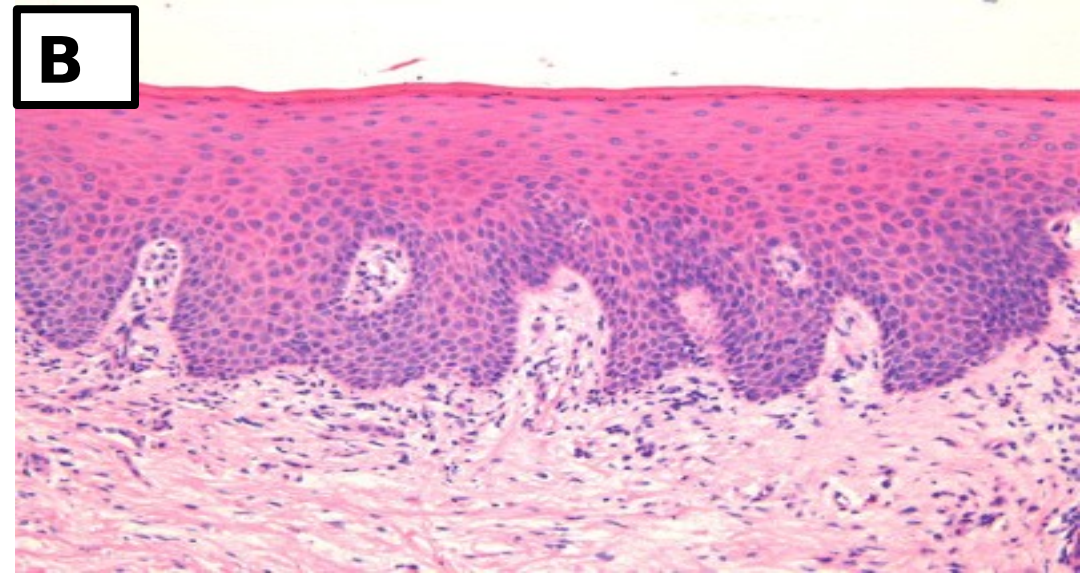
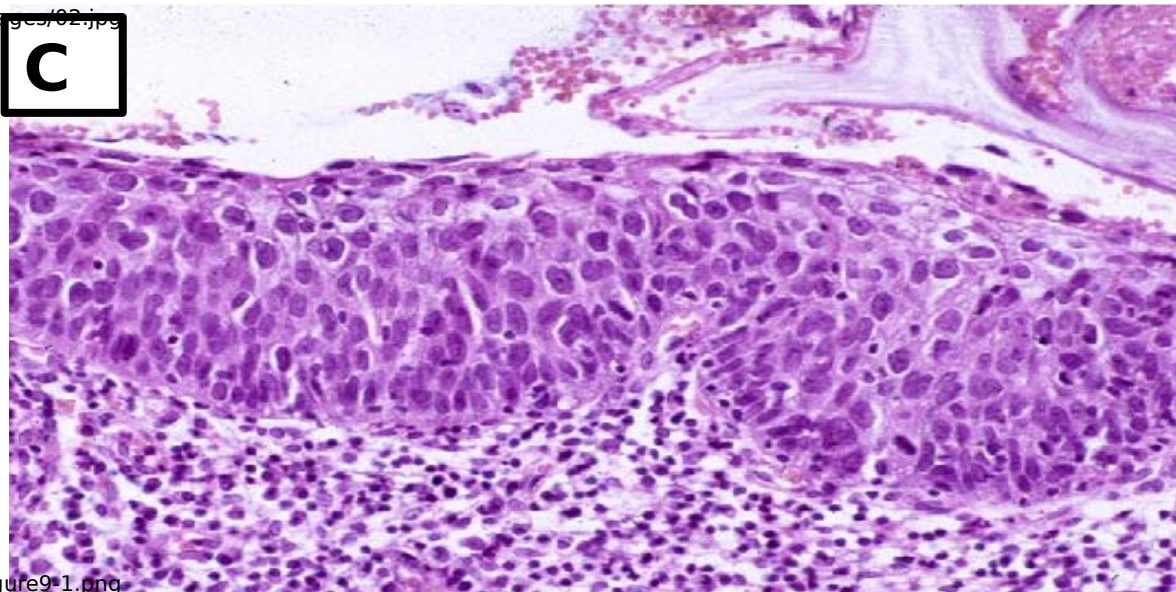
https://medicine.uiowa.edu/iowaprotocols/sites/medicine.uiowa.edu.iowaprotocols/files/011%2520cis

Which of these is /are a picture of Leukoplakia?

https://pathology.or.jp/corepicturesEN/07/c03/images/02.jpg

https://basicmedicalkey.com/wp-content/uploads/2016/11/n01f001-1.gif

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Tumours of oral cavity

Benign tumours:

- Squamous cell papilloma
- Cavernous haemangioma
- Cavernous lymphangioma
- Fibroma
- Tumours of minor salivary glands.

Malignant tumours:

1. Squamous cell carcinomas
2. Tumours of salivary glands

Squamous cell carcinoma of oral cavity

:Pdf

:Chronic irritation

Leukoplakia or Erythroplakia -1

.Tobacco use -2

Human papilloma virus infection(types -3 .16, 18)

:**Sites**

Lips, tongue(especially anterior 2\3) and .oral mucosa

http://www.jicdro.org/articles/2017/9/2/images/JIntClinDentResOrgan_2017_9_2_94_221388_f1.jpg

Squamous cell carcinoma of oral cavity

: Gross

Sites: Lips, tongue(especially anterior 2\3) and .oral mucosa

- Fungating polypoid mass
- Malignant Ulcer

https://img.medscapestatic.com/pi/meds/ckb/52/28152tn.jpg

https://www.msdmanuals.com/-/media/manual/professional/images/erythroplakia_high.jpg?mw=350&thn=0&la=en

Squamous cell carcinoma of oral cavity

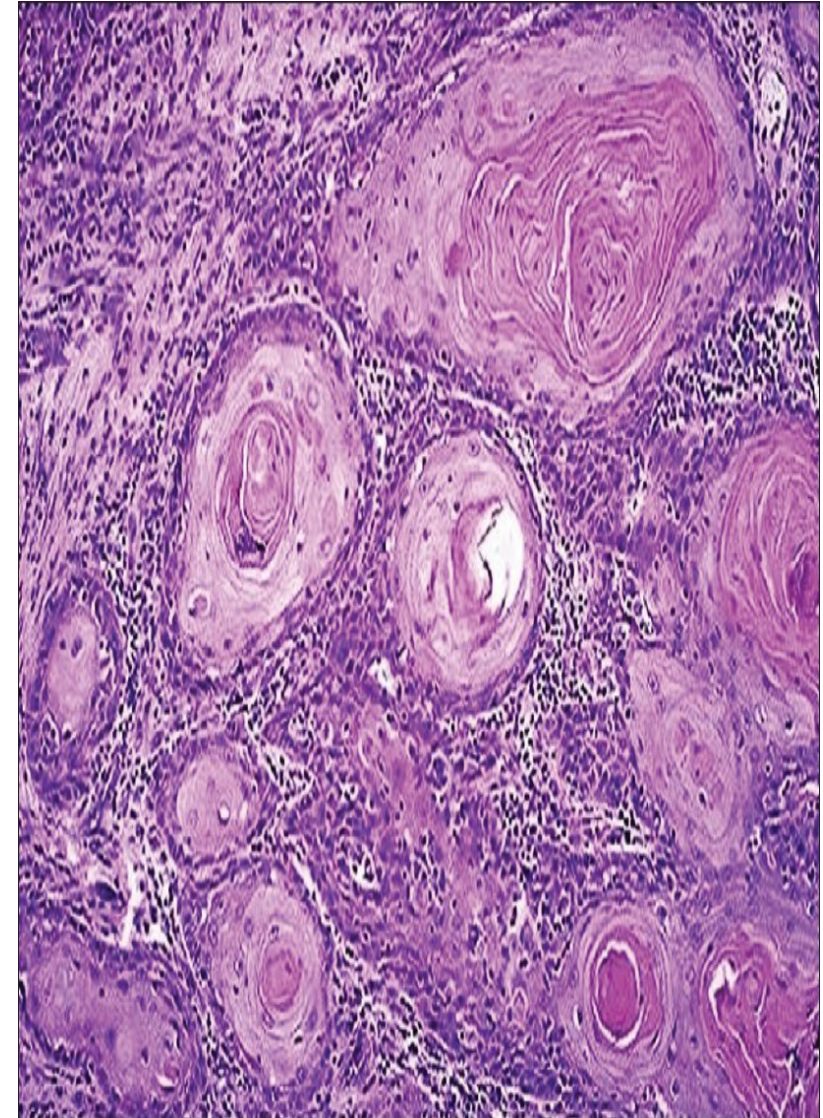
:Mic

Nests of malignant squamous cells with .keratin pearls formation

Well, moderate, or poorly differentiated

:**Spread**

1- Direct: To surrounding structures eg. mouth floor

Lymphatic to regional lymph nodes -2 →cervical

http://www.jomfp.in/articles/2013/17/1/images/JOralMaxillofacPathol_2013_17_1_45_110720_f10.jpg

Predisposing factors of Squamous cell carcinoma (Quiz)

Oral squamous cell carcinoma may be predisposed by which of the following ?

a. Oral candidiasis
b. Herpetic Stomatitis
c. Leukoplakia
d. Aphthous ulcer

Predisposing factors of Squamous cell carcinoma (Quiz)

Oral squamous cell carcinoma may be predisposed by which of the following ?

a. Oral candidiasis
b. Oral candidiasis
c. Herpetic Stomatitis
d. Leukoplakia
e. Aphthous ulcer

Key points

- **Features of Ulcers of the oral cavity**
- **Pathologic Features of Leukoplakia/Erythroplakia**
- **Leukoplakia/Erythroplakia are precancerous lesions**
- **Pathologic features and predisposing factors of of Squamous cell carcinoma**

Suggested Textbooks

Kumar V, Abbas A, Aster J : In Robbins and Cotran pathologic basis of disease, 10th edition. Elsevier Saunders. Chapter 16

AWW!
THANK YOU
ORIGINAL